

### **REMARKS**

The Office Action mailed on September 15, 2006 has been given careful consideration by applicant. Reconsideration of the application is requested in view of the comments herein. Claims 1-29 are withdrawn and claims 30-48 are elected with traverse. Claims 30, 32, 37, 44, 47 and 48 have been amended herein and claim 49 has been newly added.

#### **The Office Action**

Restriction is required to one of two groups, claims 1-29 to Group I and claims 30-48 to Group II;

Claim 48 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim;

Claims 32, 37, and 47 are rejected under 35 U.S.C. 112, second paragraph as being indefinite for failing to point out and distinctly claim the subject matter which applicant regards as the invention;

Claims 30-35 and 37-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Getz et al. (US Patent No. 4,654,924) in view of Grasso et al. (US Patent No. 6,105,202);

Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Getz et al. in view of Grasso et al. and further in view of Salem et al. (US Patent No. 6,832,407);

Claims 39-40 and 42-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Getz et al. in view of Grasso et al. and further in view of McCormick (US Patent No. 6,351,872); and

Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Getz et al. in view of Grasso et al. and McCormick and in further view of Baker (US Patent No. 4,245,370).

#### **Restriction Requirement**

The examiner has required a restriction to one of Group I (claims 1-29) and Group II (claims 30-48). Further to the examiner interview on August 30, 2006, Group I is hereby

elected with traverse since the restriction requirement is improper as the standard for restriction is not satisfied.

In the Office Action dated September 15, 2006, the examiner states that a claim restriction is required since the apparatus claimed "can be used to practice another and materially different process." This line of reasoning is unsupported since the claims within each Group recite limitations that are consistent with and interrelated to claims from the other Group. Specifically, the apparatus recited in claim 30 (of Group II) cannot be employed with a process materially different than the process recited in claim 1 (of Group I).

More particularly, independent claim 1 (from Group I) recites a method to control a vacuum cleaner. The method includes the steps of detecting a differential pressure between a suction airflow path associated with the vacuum cleaner and ambient air near the vacuum cleaner and comparing the detected differential pressure to a first predetermined threshold. A first predetermined control procedure is initiated to when the detected differential pressure is less than the first predetermined threshold. A status indicator is updated based on the detected differential pressure.

Similarly, independent claim 30 (from Group II) recites a vacuum cleaner that includes a housing and a suction airflow sensor, disposed within said housing, for detecting a condition associated with a suction airflow path mounted to the housing. A sensor processor is disposed within said housing, in communication with the suction airflow sensor for evaluating the detected condition, to determine whether a responsive action is required. When such action is required, the sensor processor initiates a suitable predetermined control procedure in response to the detected condition. A vacuum source is disposed within said housing, for creating the suction airflow path to provide a vacuuming function for collection of dust and dirt particles. A controller processor is also disposed within said housing, in communication with the sensor processor for selectively controlling the vacuum source. The suction airflow sensor includes a differential pressure sensor for detecting a difference between a first pressure associated with the suction airflow path and a second pressure associated with ambient air near the vacuum cleaner.

Both claim 1 and 30 are utilized with vacuum cleaners, both claim 1 and 30 recite pressure sensing within a vacuum airflow path, both claim 1 and 30 recite monitoring a pressure differential between a suction airflow path and an ambient pressure, and both

claim 1 and 30 recite following a predetermined control procedure when a pressure is outside a predetermined threshold.

For at least the above mentioned reasons, the apparatus recited in independent claim 30 (of Group II) inherently utilizes the process recited in claim 1 (of Group I) and cannot be employed with a process materially different than the process recited in claim 1. Thus, the limitations set forth in the subject claims should not be restricted to Group I and Group II. Accordingly, this election is made with traverse and withdrawal of this claim restriction is respectfully requested.

### **Objection**

The examiner has objected to claim 48 under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. This objection should be withdrawn for at least the following reasons. Claim 48 has been amended to further structurally limit the apparatus recited in independent claim 46. Thus, the cited claim deficiency has been remedied and this objection should be withdrawn.

### **Indefiniteness Rejection**

The examiner has rejected claims 32, 37 and 47 under 35 U.S.C. 112, second paragraph as being indefinite for failing to point out and distinctly claim the subject matter which applicant regards as the invention. This rejection should be withdrawn for at least the following reasons. Claims 32, 37, and 47 have been amended herein to overcome the cited deficiencies. Thus, this rejection should be withdrawn.

### **First Obviousness Rejection**

Claims 30-35 and 37-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Getz et al. (US Patent No. 4,654,924) in view of Grasso et al. (US Patent No. 6,105,202). This rejection should be withdrawn for at least the following reasons. Getz in view of Grasso does not teach or suggest the subject invention as set forth in the subject claims.

As amended, independent claim 30 (and similarly independent claim 49) recites a vacuum cleaner that includes a housing and a suction airflow sensor, disposed within said housing, for detecting a condition associated with a suction airflow path mounted to the

housing. A sensor processor is disposed within said housing, in communication with the suction airflow sensor for evaluating the detected condition, to determine whether a responsive action is required. A floor type sensor is disposed within the housing, in operative communication with the sensor processor for emitting sonic energy toward a floor being traversed by the vacuum cleaner and detecting sonic energy reflected by the floor. The sensor processor interprets the detected sonic energy to identify a floor type, and initiates a predetermined control procedure based on the type of floor being traversed. A controller processor is in communication with the sensor processor for selectively controlling the vacuum source, based at least in part upon information received from the sensor processor. Getz and Grasso individually and in combination, do not teach or suggest the invention as set forth in the subject claims.

More particularly, Getz and Grasso do not teach or suggest a floor type sensor disposed within the housing, in operative communication with the sensor processor for emitting sonic energy toward a floor being traversed by the vacuum cleaner and detecting sonic energy reflected by the floor, wherein the sensor processor interprets the detected sonic energy to identify a floor type, and initiates a predetermined control procedure based on the type of floor being traversed. The examiner, in the Office Action dated September 30, 2006, concedes that neither Getz nor Grasso teach or suggest a floor type sensor let alone a floor type sensor coupled to a sensor processor to determine floor type and to initiate a control procedure based on information received, as recited in the subject claims.

For at least the aforementioned reasons, Getz and Grasso do not teach or suggest the subject invention as recited in independent claims 30 and 49 (or claims 31-35, 37 and 38 which depend therefrom). Accordingly, withdrawal of this rejection is respectfully requested.

### **Second Obviousness Rejection**

The examiner has rejected claim 36 under 35 U.S.C. 103(a) as being unpatentable over Getz et al. in view of Grasso et al. and further in view of Salem et al. (US Patent No. 6,832,407). This rejection should be withdrawn for at least the following reasons. Claim 36 depends from independent claim 30, and Salem et al. does not make up for the aforementioned deficiencies of Getz and Grasso regarding a floor type sensor disposed within a housing, in operative communication with a sensor processor for emitting sonic

energy toward a floor being traversed by the vacuum cleaner and detecting sonic energy reflected by the floor, wherein the sensor processor interprets the detected sonic energy to identify a floor type. Thus, for at least the reasons discussed above with respect to claim 30, the combination of Getz, Grasso, and Salem do not teach or suggest the subject claims. Accordingly, the rejection of these claims should be withdrawn.

### **Third Obviousness Rejection**

The examiner has rejected claims 39-40 and 42-43 under 35 U.S.C. 103(a) as being unpatentable over Getz et al. in view of Grasso et al. and further in view of McCormick (US Patent No. 6,351,872). This rejection should be withdrawn for at least the following reasons. Claims 39-40 and 42-43 depend from independent claim 30, and McCormick does not make up for the aforementioned deficiencies of Getz and Grasso regarding a floor type sensor disposed within a housing, in operative communication with a sensor processor for emitting sonic energy toward a floor being traversed by the vacuum cleaner and detecting sonic energy reflected by the floor, wherein the sensor processor interprets the detected sonic energy to identify a floor type. Thus, for at least the reasons discussed above with respect to claim 39, the combination of Getz, Grasso, and McCormick do not teach or suggest the subject claims. Accordingly, the rejection of these claims should be withdrawn.

### **Fourth Obviousness Rejection**

The examiner has rejected claim 41 under 35 U.S.C. 103(a) as being unpatentable over Getz et al. in view of Grasso et al. and McCormick and in further view of Baker (US Patent No. 4,245,370). This rejection should be withdrawn for at least the following reasons. Claim 41 depends from independent claim 30, and Baker does not make up for the aforementioned deficiencies of Getz, Grasso, and McCormick regarding a floor type sensor disposed within a housing, in operative communication with a sensor processor for emitting sonic energy toward a floor being traversed by the vacuum cleaner and detecting sonic energy reflected by the floor, wherein the sensor processor interprets the detected sonic energy to identify a floor type. Thus, for at least the reasons discussed above with respect to claim 30, the combination of Getz, Grasso, McCormick, and Baker do not teach

or suggest the subject claims. Accordingly, the rejection of these claims should be withdrawn.

**CONCLUSION**

For the reasons detailed above, it is submitted that the claims in the subject application are now in condition for allowance. The foregoing comments do not require unnecessary additional search or examination.

In the event the Examiner considers personal contact advantageous to the disposition of this case, he/she is hereby authorized to call Jay Moldovanyi, at Telephone Number (216) 861-5582.

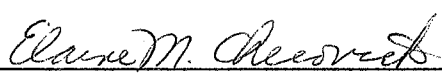
Respectfully submitted,

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